

REMARKS

Claims 1-45 and 47-54 are pending in the present application. By this amendment, the Abstract has been amended; Claims 15-17, 20, 24, 28, 39, 47 and 53-54 have been amended; and Claim 46 has been canceled. Applicants respectfully request reconsideration of the present claims in view of the foregoing amendments and following remarks. Claims 17, 20, 24 and 28 were amended to correct a misspelling.

I. Formal Matters:

Abstract

The Abstract was objected to for use of the language "is directed to". Applicants have amended the Abstract to remove this terminology. Accordingly, Applicants respectfully request withdrawal of this objection.

Allowable Subject Matter

Applicants wish to thank Examiner Grayson for indicating that Claims 14-15 and 53-54 would be allowable if rewritten in independent form. As Claim 14 was rejected and as Claim 16 corresponds to Claim 54, it is presumed that Claims 15-16 and 53-54 should have been indicated as allowable and Applicants have acted accordingly. Applicants have rewritten Claims 15-16 and 53-54 in independent form. Accordingly, it is respectfully submitted that these claims are now allowable.

II. Prior Art Rejections:

Rejections under 35 U.S.C. § 102(b)

Claims 1-3, 6 and 8-13 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Pat. No. 3,901,236 to Assarsson et al. (hereafter "Assarsson"). This rejection is respectfully traversed.

Claim 1 is directed to, *inter alia*, a web comprising superabsorbent material and fibers wherein at least some of the fibers are coated onto the superabsorbent material prior to formation of the web, the web is formed while the superabsorbent material contains a liquid that it has absorbed, and at least some of the liquid absorbed in the superabsorbent material is removed after formation of the web. Claim 17 is directed to, *inter alia*, a web comprising fibers and superabsorbent material, wherein the web comprises a superabsorbent material content of at least about 60% by dry weight and the web experiences a web loss of less than about 9% when subjected to a Shakeout Test.

Claim 20 is directed to, *inter alia*, a web comprising fibers and superabsorbent material, wherein the web comprises a superabsorbent material content of at least about 70% by dry weight and the web experiences a web loss of less than about 15% when subjected to a Shakeout Test. Claim 24 is directed to, *inter alia*, a web comprising fibers and superabsorbent material, wherein the web comprises a superabsorbent material content of at least about 80% by dry weight and the web experiences a web loss of less than about 17% when subjected to a Shakeout Test. Claim 28 is directed to, *inter alia*, a web comprising fibers and superabsorbent material, wherein the web comprises a superabsorbent material content of at least about 90% by dry weight and the web experiences a web loss of less than about 58% when subjected to a Shakeout Test. Claim 35 is directed to, *inter alia*, a web comprising fibers and superabsorbent material wherein the web loss experienced by the web when subjected to a Shakeout Test is not a monotone nondecreasing function of the concentration of superabsorbent material in the web. Claim 37 is directed to, *inter alia*, a web comprising fibers and superabsorbent material wherein the web loss experienced by the web when subjected to a Shakeout Test is a monotone nonincreasing function of the concentration of superabsorbent material in the web. Claim 39 is directed to, *inter alia*, a web comprising fibers and at least one superabsorbent material at least partially coated with the fibers, wherein individual bodies of the superabsorbent material have bonds with each other, with fibers that are coated upon other bodies of the superabsorbent material, or with a combination thereof, and the superabsorbent material comprises a composition that forms such bonds upon removal of a liquid contained in the superabsorbent material.

Assarsson is directed to superabsorbent particles that are coated with a fiber to form extremely small hydrogel composite particles. These particles are small and designed to be able to passing through a 5 mesh screen (col. 5, lines 1 to 7). This indicates that the hydrogel composites of Assarsson are all less than or equal to 4 mm in size. The hydrogel particles are used with fibers in the formation of disposable personal care articles.

It is respectfully submitted that Assarsson fails to teach or suggest Applicants' claimed invention. Assarsson fails to teach or suggest Applicants' claimed invention as the hydrogel particles are coated and then dried *before* they are used. As set forth in columns 8 and 9, in all the processes used to form the hydrogel particles, the hydrogel was dried *before* formation into particles that were then used to form the composites of the claimed invention. As Applicants specifically claim that the webs are formed and then dried, Assarsson fails to teach or suggest Applicants' claimed invention.

By drying after web formation, Applicants achieve the desired shake-out properties. As shown in Comparative Example 2 of Applicants' specification, webs formed with dried particles have much less desirable shake-out properties. As such, since Assarsson dries their particles first, any resultant web would have undesirable shake-out properties. Additionally, since Assarsson prefers only a minimal amount of water in the hydrogel particle, Assarsson teaches away from Applicants' claimed invention of not drying the superabsorbent until after web is formed. Accordingly, it is respectfully submitted that Assarsson fails to teach or suggest Applicants' claimed invention.

For at least the reasons given above, Applicants respectfully submit that Claim 1 is allowable over the art of record. Furthermore, since Claims 2-3, 6 and 8-13 recite additional claim features and depend from Claim 1, these claims are also allowable over the art of record. Accordingly, Applicants respectfully request withdrawal of this rejection.

Claims 17-52 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Pat. No. 5,516,569 to Veith (hereafter "Veith"). This rejection is respectfully traversed.

Applicants' invention may be relied upon as above.

Veith is directed to absorbent composites including a web having a fibrous material and a particulate superabsorbent material.

It is respectfully submitted that Veith fails to teach or suggest Applicants' claimed invention. The Examiner relies upon a shake-out test provided in Veith to state that Veith allegedly teaches Applicants' claimed invention. However, Applicants have defined their test as set forth in the Examples and this test is not the same as the test Veith used and, as such, the shake-out values disclosed in Veith are not commensurate in scope with Applicants' claimed invention. In Veith, the samples are prepared such that if a tissue was used to form a sample, the tissue remains during the shake-out test and the sample is placed between the spunbond and the blotter layer. However, as set forth in Applicants' test, if a tissue was used in making the composite, then the tissue is removed prior to running the test. As such, in Veith, the tissue acts to hold a greater amount of superabsorbent particles in place such that a lower shake-out results than if the tissue had been removed. The tissue is needed in Veith since the tissue is the main reason the superabsorbent does not shake-out since the superabsorbent particles are not attached to the web in the manner that Applicants' claimed superabsorbent particles are attached. By forming the web and then drying, the superabsorbent particles are better attached in

Applicants' claimed invention and the tissue is not needed to reduce shake-out. As such, since Veith uses a different test for shake-out and since Veith fails to teach drying of the web after formation of the web, Veith fails to recognize, teach or suggest the advantages of drying the web after formation to reduce the shake-out of the superabsorbent without the need for a tissue. As such, it is respectfully submitted that Veith fails to teach or suggest Applicants' claimed invention.

Additionally, in regards to Claim 35, the examples in Veith show that as the amount of superabsorbent is increased, the level of shake-out also increases. This would be expected, especially since Veith attempts to minimize shake-out through use of the tissue, as described above, and not by forming a web and then drying, such that the superabsorbent is better connected to the web. However, as claimed in Claim 35, the amount of shake-out generally decreases as the amount of superabsorbent increases, and this aspect is not recognized, taught or suggested by Veith. Accordingly, it is respectfully submitted that Veith fails to teach or suggest Applicants' claimed invention.

Finally, in Veith, the amount of water located in the composite is much lower than in Applicants' claimed invention. In Veith, the maximum amount of water would be a composite having no fiber such that the composite would have 70% superabsorbent and 30% water, or a 0.43 g water/g superabsorbent. As amended, Claim 39 requires at least 0.5 g water/g superabsorbent. Therefore, Veith also fails to teach or suggest this aspect of Applicants' claimed invention. As such, it is respectfully submitted that Veith fails to teach or suggest Applicants' claimed invention.

For at least the reasons given above, Applicants respectfully submit that Claims 17, 20, 24, 28, 35, 37 and 39 are allowable over the art of record. Furthermore, since Claims 18-19, 21-23, 25-27, 29-34, 36, 38 and 40-52 recite additional claim features and depend from one of Claims 17, 20, 24, 28, 35, 37 and 39, these claims are also allowable over the art of record. Accordingly, Applicants respectfully request withdrawal of this rejection.

Rejections under 35 U.S.C. § 103(a)

Claims 4-5 and 7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Assarsson in view of U.S. Pat. No. 4,354,487 to Oczkowski (hereafter "Oczkowski"). This rejection is respectfully traversed.

Applicants' invention may be relied upon as above.

Applicants' discussion of Assarsson may be relied upon as above.

Oczkowski is directed to drying methods.

It is respectfully submitted that the combination of Assarsson and Oczkowski fails to teach or suggest Applicants' claimed invention. As previously set forth, Assarsson fails to teach or suggest the formation of webs while the superabsorbent material contains a liquid that it has absorbed such that beneficial shake-out values are obtained with the resultant webs. It is respectfully submitted that Oczkowski fails to remedy these deficiencies as Oczkowski has no teaching at all to form webs and to dry a superabsorbent material after forming into the web, not before. As such, it is respectfully submitted that the combination of Assarsson and Oczkowski fails to teach or suggest Applicants' claimed invention.

For at least the reasons given above, Applicants respectfully submit that Claim 1 is allowable over the art of record. Furthermore, since Claims 4-5 and 7 recite additional claim features and depend from Claim 1, these claims are also allowable over the art of record. Accordingly, Applicants respectfully request withdrawal of this rejection.

III. Conclusion:

For at least the reasons given above, Applicants respectfully submit that Claims 1-45 and 47-54 define patentable subject matter. Accordingly, Applicants respectfully request allowance of these claims.

The foregoing is submitted as a full and complete Response to the First Office Action mailed September 17, 2002, and early and favorable consideration of the claims is requested.

Should the Examiner believe that anything further is necessary in order to place the application in better condition for allowance, the Examiner is respectfully requested to contact Applicants' representative at the telephone number listed below.

No additional fees are believed due; however, the Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, to Deposit Account No. 11-0855.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Amendments in the Claims

In accordance with 37 C.F.R. 1.121(c), the following versions of the specification and claims as rewritten by the foregoing amendments show all changes made relative to the previous version of the specification and claims.

In the Abstract:

Please delete the current Abstract and replace with the following:

--The present invention [is directed to] provides webs comprising fibers and superabsorbent materials in which the webs exhibit low susceptibility to migration of superabsorbent material within the web, even where the webs contain very high concentrations of superabsorbent materials. The invention [is] further [directed to] provides absorbent articles comprising such webs. The invention [is] further [directed to] provides methods for manufacturing such webs.--.

In the Claims:

15. (Amended) [The web according to Claim 14,] A web comprising superabsorbent material and fibers wherein:

at least some of the fibers are coated onto the superabsorbent material prior to formation of the web,

the web is formed while the superabsorbent material contains a liquid that it has absorbed, and

at least some of the liquid absorbed in the superabsorbent material is removed after formation of the web;

wherein the superabsorbent material comprises particles; and

wherein at least some of the particles comprise an outer layer comprising at least one type of superabsorbent material and an inner core comprising at least one other type of superabsorbent material that differs from the superabsorbent material in the outer layer.

16. (Amended) [The web according to Claim 14,] A web comprising superabsorbent material and fibers wherein:

at least some of the fibers are coated onto the superabsorbent material prior to formation of the web,

the web is formed while the superabsorbent material contains a liquid that it has absorbed, and

at least some of the liquid absorbed in the superabsorbent material is removed after formation of the web;

wherein the superabsorbent material comprises particles; and

wherein at least some of the particles are comprised of SAM that exhibits a gradual trend of decrease in crosslinking proceeding from the outer surface of the particle to the center of the particle.

17. (Amended) A web comprising fibers and [suberabsorbent] superabsorbent material, wherein the web comprises a superabsorbent material content of at least about 60% by dry weight and the web experiences a web loss of less than about 9% when subjected to a Shakeout Test.

20. (Amended) A web comprising fibers and [suberabsorbent] superabsorbent material, wherein the web comprises a superabsorbent material content of at least about 70% by dry weight and the web experiences a web loss of less than about 15% when subjected to a Shakeout Test.

24. (Amended) A web comprising fibers and [suberabsorbent] superabsorbent material, wherein the web comprises a superabsorbent material content of at least about 80% by dry weight and the web experiences a web loss of less than about 17% when subjected to a Shakeout Test.

28. (Amended) A web comprising fibers and [suberabsorbent] superabsorbent material, wherein the web comprises a superabsorbent material content of at least about 90% by dry weight and the web experiences a web loss of less than about 58% when subjected to a Shakeout Test.

✓39. (Amended) A web comprising fibers and at least one superabsorbent material at least partially coated with the fibers, wherein:

individual bodies of the superabsorbent material have bonds with each other, with fibers that are coated upon other bodies of the superabsorbent material, or with a combination thereof, and

the superabsorbent material comprises a composition that forms such bonds upon removal of a liquid contained in the superabsorbent material;

wherein the bonds can form upon removal from the superabsorbent material of at least about 0.5 grams of the liquid per gram of superabsorbent material.

47. (Amended) An absorbent article comprising the web of Claim [46] 39.

✓ 53. (Amended) [The web according to Claim 52,] A web comprising fibers and at least one superabsorbent material at least partially coated with the fibers, wherein:

individual bodies of the superabsorbent material have bonds with each other, with fibers that are coated upon other bodies of the superabsorbent material, or with a combination thereof, and

the superabsorbent material comprises a composition that forms such bonds upon removal of a liquid contained in the superabsorbent material;

wherein the superabsorbent material comprises particles, and

wherein at least some of the particles comprise an outer layer comprising at least one type of superabsorbent material and an inner core comprising at least one other type of superabsorbent material that differs from the superabsorbent material in the outer layer.

✓ 54. (Amended) [The web according to Claim 52,] A web comprising fibers and at least one superabsorbent material at least partially coated with the fibers, wherein:

individual bodies of the superabsorbent material have bonds with each other, with fibers that are coated upon other bodies of the superabsorbent material, or with a combination thereof, and

the superabsorbent material comprises a composition that forms such bonds upon removal of a liquid contained in the superabsorbent material;

wherein the superabsorbent material comprises particles, and

wherein at least some of the particles are comprised of SAM that exhibits a gradual trend of decrease in crosslinking proceeding from the outer surface of the particle to the center of the particle.